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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,593	11/24/2003	Bradley C. Aldrich	10559-186002	5807

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EXAMINER
REKSTAD, ERICK J

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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	Application No.	Applicant(s)
Office Action Summary	10/721,593	ALDRICH ET AL.
	Examiner	Art Unit
	Erick Rekstad	2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 November 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>24-49</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>24-28,30-35,37,38 and 40-49</u> is/are rejected.

7)☒ Claim(s) <u>29,33,36,39 and 49</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/24/2003</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

This is a first action for application no. 10/721,593 filed on November 24, 2003 as

a continuation of application 09/589,630. Claims 24-49 are presented for examination.

Claim Objections

Claim 33 is objected to because of the following informalities: The claim

depends on cancelled claim 1. It is assumed the claim should depend from claim 24.

Appropriate correction is required.

Claim 49 is objected to because of the following informalities: The status of the

claim is missing. The claim should state the status, such as (New). Appropriate

correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claim 24-28, 31, 32, 44-49 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US Patent 5,973,742 to Gardyne et al in view of US Patent 6,263,024

to Matsumoto.

[claims 24 and 44]

As shown in Figure 1, Gardyne teaches a system for performing video compression including a motion estimation system using a general purpose computer (60) (Col 7 Lines 8-11, 19-20 and 33-44). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a laptop as the general purpose computer in order to provide a more portable system (Official Notice). As shown in Figures 7 and 8, Gardyne teaches a plurality of image manipulating devices(322), each operating to determine similarities between two image parts obtained from said video acquiring part (Col 12 Lines 44-46, Col 13 Lines 37-45). Gardyne further teaches the selection of two modes (frame and field) (Col 14 Lines 10-19). Gardyne does not specifically teach the use of a switch in order to select the mode. Matsumoto shows in Figure 4 the use of a switch (142) to select the different modes of operation. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Gardyne with the switch of Matsumoto in order to switch between the different modes of operation.

[claims 25 and 45]

Gardyne teaches the image manipulating devices are sum of absolute difference devices. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the sum of absolute difference devices in order to provide an efficient motion estimation means for either frame mode or field mode as taught by Gardyne. (Col 4 Line 60-Col 5 Line 9, Col 6 Lines 14-20, Col 12 Lines 44-46, Col 13 Lines 37-45, Col 15 Lines 39-52, Figs. 7 and 8).

[claim 26, 28, 31, and 46]

Gardyne teaches the first mode (frame) performing the image manipulating on a whole block. Gardyne further teaches the second mode (field) performing the image manipulating on half of a block (Col 13 Lines 18-28, Col 16 Lines 55-62).

[claim 27]

Gardyne further teaches the block size can be 16X16 (Col 13 Lines 18-28).

[claims 30 and 32]

Matsumoto further teaches a logic unit (141) for detecting which of the modes will produce a desired result (most efficient encoding) and configures a calculation to said mode (Col 2 Lines 3-12, Col 8 Lines 2-31, Fig. 4).

[claims 47-49]

As shown above for claims 24, 25 and 26, Gardyne and Matsumoto teach a general purpose computer using a video encoder. Gardyne further teaches the video encoder is for mpeg encoding. Gardyne further teaches mpeg is used for HDTV video (Col 2 Lines 6-13, Col 3 Lines 11-19, Col 4 Lines 49-59). Gardyne further teaches the system combined with a set top box (Col 8 Lines 30-35). As shown in Figure 2, Gardyne teaches the system contains an mpeg decoder (74), which is used to display the video on a display device (Col 9 Line 65-Col 10 Line 3). It would have been obvious to one of ordinary skill in the art at the time of the invention that the system of Gardyme containing a set top box, an mpeg decoder and a general purpose computer would be a high definition television system as mpeg is used for High Definition video.

Claims 33-35, 37, 38, 40, 42 and 43 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Gardyne and Matsumoto as applied to claim 24 above, and

further in view of US Patent 6,177,950 to Robb.

[claim 33]

Gardyne and Matsumoto teach the system of claim 24 as shown above.

Gardyne further teaches a coding processor (76) connected to the bus of the system

(Col 7 Lines 33-44, Fig. 3). Matsumoto teaches the use of a switching of the modes for

efficient encoding of video (Col 2 Lines 3-12, Col 8 Lines 2-31, Fig. 4). Gardyne does

not teach the system contained in a cellular telephone. Matsumoto does not teach the

system contained in a cellular telephone.

As shown in Figures 1A-1B, Robb teaches a cellular phone device containing a

camera (2) (Abstract, Col 5 Lines 32-47). Figures 3A-3B further teach the phone

containing a general purpose microprocessor (41) connected to a codec (50) for coding

video (Col 7 Lines 18-50). It would have been obvious to one of ordinary skill in the art

at the time of the invention to combine the personal communication device of Robb with

the encoding system of Gardyne and Matsumoto in order to provide an efficient

encoding system for a general purpose computer.

[claims 34, 35, 37, 38, 40, 42 and 43]

As shown above for claims 24 and 32, Gardyne and Matsumoto teach the

plurality of sum of absolute difference devices and a calculation partitioning element,

wherein the element is a switching element. Gardyne and Matsumoto do not teach the

use of the coding system in a camera. As shown above for claim 33, Robb teaches the

use of a coding system and camera (2) within a cellular phone (20) (Fig. 1A). It would have been obvious to one of ordinary skill in the art at the time of the invention that the device of Robb is a camera containing a video coder.

[claim 41]

Robb further teaches the use of the device as a videoconferencing unit (Col 1 Lines 4-12).

Allowable Subject Matter

Claims 29, 36 and 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 6,192,257 to Ray.

US Patent 6,690,728 to Chang et al.

US Patent 6,519,005 to Bakhmutsky et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 703-305-5543. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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